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April 4, 2008

Mr. Hans Larsen Director of General Government Town of Wellesley 525 Washington Street Wellesley, MA 02482

3016 - 36

DRAFT

Re: 27 Washington Street (Grossman's) Redevelopment

Peer Review of Project of Significant Impact-Municipal Systems Impact Analysis-

Traffic Component

Dear Mr. Larsen:

At your request, BETA Group, Inc. has completed its review of the Traffic Impact Analysis related to traffic and pedestrian safety issues for the proposed redevelopment of 27 Washington Street. The impact study was completed by Conley Associates in December 2007 and submitted to the Town of Wellesley. BETA was also provided a memorandum dated December 7, 2007 entitled "Additional Information Requested by BETA" and the site plan set entitled "Arborpoint at Wellesley & Retail/Office Building" dated December 14, 2007 for relevant review. On February 6th, 2008 we met with Town officials to discuss their peer review comments dated February 5th, 2008. Subsequently, we met with Town officials and the proponent on February 13, 2008 to discuss BETA's comments and various mitigation concerns of the Town and BETA. On February 28, 2008 BETA received a memo entitled "Response to BETA Peer Review Comments" dated February 21, 2008 and another entitled "Potential Washington Street Corridor Improvements" dated February 25, 2008. On March 4, 2008 there was a follow up meeting with Town officials, the proponent and BETA to further discuss mitigation. Conley Associates and BETA met on March 6th, 2008 and March 18th, 2008 to discuss mitigation, traffic analysis and conception design options in preparation for the March 20th, 2008 meeting with Town officials. Outstanding issues from BETA's original peer review are shown in italics and are followed by our review of Conley's response:

EXISTING CONDITION

TRAFFIC VOLUME DATA

<u>BETA</u>: We ask the proponent to calculate a K factor based on the TMC data collected to compare with the ATR count data K factor.

Conley: Conley Associates, Inc. had determined the K factor based on the ATR data peak hour (weekday AM, 8:00 AM to 9:00 AM, approximately 2,010 vehicles) compared to the ATR daily traffic total (approximately 23,465 vehicles). As requested Conley Associates, Inc. has now calculated the K factor based on the hand collected TMC peak hour data and determined the TMC peak hour to ATR daily K factor to be 0.074. It

should be noted that using the TMC data compared to the ATR data is less accurate due to the many driveways through the study area. It is difficult to determine, based on the TMC data at adjacent intersections, the exact number of vehicles traveling through the location of the ATR.

BETA agrees with the revised ATR k factor of 0.086 as discussed with the proponent. Using the TMC morning peak hour volume of 1,725 vehicles for the intersection of Washington Street and Columbia Street as well as the ATR ADT of 23,465 vehicles, Conley calculated a k factor of 0.074. The TMC k factor is less accurate considering the peak hour volume was based on the TMC peak hour for the intersection of Columbia Street and Washington Street and the ATR ADT which was located just north of the proposed site driveway.

<u>BETA</u>: During a field check BETA observed left turning vehicles entering and exiting the One Washington Street driveway located between Mica Lane and River Street. These movements cause significant traffic blockage resulting in long queues on both Washington Street approaches to the intersection. To address this issue, we request that the proponent include this intersection in the study and perform a turning movement count and traffic analysis at the One Washington Site driveway.

<u>Conley</u>: Conley Associates, Inc. and BETA agreed at the review meeting that the collection of additional data is not pertinent at this time. Depending on the potential transportation improvements chosen by the Town (as part of this project and to rectify existing transportation issues throughout the corridor), certain existing issues will be rectified through the improvement measures. Therefore, continued study of the existing issues could be rendered irrelevant.

BETA requests a turning movement count be performed at the One Washington Street driveway. This data will be required to evaluate traffic improvements along this section of Washington Street. In addition, the traffic volume activity at the One Washington Street driveway will help understand the critical left turning volume out of the driveway, especially during the peak commuting periods.

EXISTING TRAFFIC VOLUMES

<u>BETA</u>: The proponent should revise the left turning volume exiting Oakland Street during the PM peak hour in Figure 3 and the corresponding SYNCHRO analysis. The left turn volume should be 2 vehicles turning left according to the turning movement count instead of the 158 vehicles shown in the analysis. Figure 6 and Figure 14 should be revised accordingly.

<u>Conley</u>: The TMC data collected during the weekday PM at the intersection of Washington Street at Oakland Street shows there were two (2) vehicle trips traveling northbound on Oakland Street and turning left onto Washington Street. Conley Associates, Inc. incorrectly showed a volume of 158 northbound left turns on Figure 3 and also incorrectly analyzed the intersection with 158 northbound left turns. Conley



Associates, Inc. has corrected the volume for the Existing, No Build, and Build conditions (Figures 3, 6, and 14, respectively). Conley Associates, Inc. reanalyzed the intersection with the corrected northbound left turn volume. The Oakland Street approach to Washington Street operates at LOS C in all three conditions during the weekday PM peak hour (as compared to LOS F reported in the TIS).

The revised back-up analysis including these volume adjustments has been provided to BETA.

DATA COLLECTION DURING THE SCHOOL PEAK HOUR

<u>BETA:</u> On November 8th and 15th, 2007 turning movement data was collected. Data collected included all pedestrian, vehicle and bus activity during the school pick-up (2:00-3:00 PM) at St. John the Evangelist School. We request that this back-up data be provided for our review.

<u>Conley</u>: Please find the TMC data from the school peak hour (2:00 PM to 3:00 PM) attached.

BETA has not received the school peak hour back-up data for review.

ACCIDENT DATA

<u>BETA</u>: We request the proponent to provide back-up of the MassHighway crash data presented in this report. If available, the most recent 3-year updated accident reports from the Wellesley Police Department should also be obtained to include recent accident reports in the study area.

<u>Conley</u>: As stated previously, during the review meeting it was decided that additional data not be collected at this time. The MassHighway data has been provided to BETA in electronic format.

On March 4th, BETA received the electronic MassHighway accident data. For comparison purposes, the Wellesley Police Department should be obtained for the Glen Road/Washington Street and River Street/Washington Street intersections.

<u>BETA</u>: According to the data provided there were no accidents reported during the years 2003-2005 at the intersection of Washington Street and Concord Street located in the City of Newton. We recommend that the proponent verify this and suggest they check both the MassHighway and City of Newton Police Department crash data for the most recent three years available.

<u>Conley</u>: Conley Associates, Inc. has researched the City of Newton MassHighway data for the most recent three year period available (2004-2006). A review of the data showed that there were four accidents at this intersection in 2004 and five accidents at the intersection in 2005. No accidents were reported at this intersection in 2006. The backup data for this intersection is in the accident data provided to BETA in electronic format.



On March 4th, BETA received the electronic MassHighway data for the Washington Street and Concord Street intersection for the most recent three years available (2004-2006).

NO-BUILD CONDITION

SITE SPECIFIC DEVELOPMENT

<u>BETA</u>: Presently, there is a proposed Temple Beth Elohim renovation project which is located off of Cedar Street. We request that this additional background development be included in the report's analysis.

<u>Conley</u>: The expected traffic increase in the study area due to this project is expected to minimal. In addition, since this project had not been submitted to the Town at the time of the completion of the TIS, it was determined at the review meeting that the traffic associated with this project need not be included.

Considering the Temple Beth Elohim project had not yet been officially submitted to the Town as of February 13, 2008, BETA is in agreement with the proponent that the project trips do not need to be included in the analysis.

NO BUILD TRAFFIC VOLUMES

<u>BETA:</u> We request the proponent to provide a trip distribution map of the proposed/future developments added to the No Build 2012 volumes for reference.

<u>Conley</u>: The traffic associated with both the Wellesley Inn and Linden Square projects was sent through the entire Washington Street corridor through the study area. It was assumed, in order to provide the highest traffic volume impact at each study area that none of the traffic from these developments that reached the study area would turn at a study area intersection. This was explained at the review meeting and it was determined that a trip distribution network would not be necessary.

BETA was provided with the trip distribution information along Washington Street.

BUILD CONDITION

TRIP GENERATION

<u>BETA:</u> BETA recommends the calculated sixty-one total trips during the Saturday Midday peak hour to be too low. BETA recommends the following options in calculating the Specialty Retail Saturday Midday peak hour trips:

- 1. There are data points within the 17,000 square feet range under LUC 820 for AM and Saturday, utilize those average rates to calculate the trips generated.
- 2. Research historical data from a similar specialty retail store in a comparable area.



<u>Conley</u>: Conley Associates, Inc. utilized LUC 820 as requested in recommendation number 1. Based on ITE LUC 820, the 17,000 square feet of retail space is expected to generate 84 vehicle trips during the Saturday midday peak hour. Conley Associates, Inc. distributed the additional 23 vehicles through the study area and reanalyzed the intersections and found no changes in LOS operating conditions.

The revised Saturday midday peak hour analysis for the Site Driveway and Washington Street intersection, which would include the additional 23 vehicle trips produced by the specialty retail, has not been provided. We request this analysis from the proponent for our review.

INTERNAL CAPTURE TRIPS

<u>BETA</u>: We recommend the proponent utilize the "Multi-Use Development Trip Generation and Internal Capture Rate Summary" (available in the ITE Trip Generation Book) in order to identify the most appropriate internal capture rate and include the internal capture rate calculations for our review.

<u>Conley</u>: Conley Associates, Inc. did use the internal capture rates included in the <u>Trip Generation Handbook</u>. As stated in the TIS, Table 7.1 (Internal Capture Rates for Trip Origins within a Mult-Use Development) of the <u>Trip Generation Handbook</u> was utilized. Table 7.1 summarizes the Multi Use Trip Generation Calculations for typically combined uses (retail, residential, and office). As per Table 7.1, Conley Associates, Inc. assumed 12 percent of the trips from the retail space would go to the residential use. To be conservatively high in our analysis, no internal capture trips were assumed between office and residential, nor the office and retail, although it is likely that there will be internal capture trips between these uses as well.

BETA is in agreement with the proponent using the 12% internal capture rate considering this approach is more conservative.

TRIP DISTRIBUTION

<u>BETA:</u> We recommend re-evaluating this (referring the US Census Journey to Work data and the high right turn percentage exiting the site) and adjusting the trip distributions accordingly.

<u>Conley</u>: Conley Associates, Inc. and BETA discussed the trip distribution during the review meeting. As shown in the Appendix of the TIS, based on the Census data, more than 35 percent of the working residents of Wellesley also work in Wellesley. Since the site is on the east end of Wellesley, any resident of the development working in Wellesley would turn right out of the site. In addition, residents traveling west on Route 9 to access points west of Wellesley would also turn right out of the site. Therefore, Conley Associates, Inc. and BETA agreed at the review meeting that the 50 percent split of the residential and office trip distribution to be accurate.

As discussed with the proponent, BETA would like the proponent to recalculate the distribution of the Wellesley residents that work in Wellesley, a portion of the Boston commuters from



Wellesley and other commuters that utilize Route 90 to go to work. These vehicles would turn left out of the proposed site instead of right and the trips would be redistributed.

<u>BETA</u>: The Figure 8 and Figure 9 information is unclear. We request that these figures be updated so they are legible and incorporate the above residential distribution changes.

<u>Conley</u>: The trip distribution percentages were not legible in the copy of the TIS that BETA received. The percentages were clarified at the review meeting and are also attached. In addition, as stated previously, no change in the distribution is necessary.

BETA has received the legible Figures 8 and 9. However, the proponent may be revising these diagrams according to the pending revision addressed previously.

EXISTING TRAFFIC OPERATIONS ANALYSIS

INTERSECTION OPERATING CONDITIONS

WASHINGTON STREET AT CONCORD STREET

BETA: The liquor store driveway volumes opposite Concord Street and an exclusive pedestrian phase with an estimate of actuations are not reflected in the analysis. Analysis should also be calibrated to reflect existing conditions including the downstream bottleneck to the west and adjusting saturation flows on Washington Street and Concord Street due to downstream queuing. We suggest performing a saturation flow study at this intersection. While this intersection is located in Newton, it is critical to the traffic operation on Washington Street in the study area.

<u>Conley</u>: The intersection operations analysis did include the bottleneck caused to the west of the Concord Street intersection. Synchro 6 software is capable of including the effect of a lane drop downstream from a signalized intersection (this is not true for a lane drop downstream from an unsignalized intersection). As mentioned previously, it is not pertinent to conduct a saturation flow rate at this time since potential improvements now being studied will increase the capacity at this intersection eliminating the need for a saturation flow study.

The driveway across from Concord Street has not been included in the Synchro analysis. During the PM peak hour the TMC reflects that 29 left turns and 24 right turns exit the driveway. If this driveway is currently controlled by the existing traffic signal then BETA requests this approach be included in the analysis. We request that the proponent include a minimum of 5 pedestrian calls during each peak hour to reflect more accurate analysis results. BETA is in agreement with Conley's response regarding the saturation flow study and does not request a saturation flow study at the time.



<u>BETA</u>: Queuing along Washington Street eastbound at this intersection has not been discussed. Based on our observations the eastbound queue backs up to Hillside Road during the AM commuting peak period.

<u>Conley</u>: The westbound queue lengths at this intersection was specifically requested by BETA and therefore included in the TIS. This data was requested to determine the impact of the queue lengths on Grove Street. Conley Associates, Inc. agrees that the eastbound queue at this intersection is lengthy during the weekday AM peak period. The mitigation measures proposed by the proponent in the TIS and the transportation improvements being investigated now will help to reduce the queue experienced at this intersection in the eastbound direction.

BETA will review the analysis and proposed mitigations provided by the proponent to confirm the effectiveness in mitigating this queue problem.

<u>BETA</u>: The traffic operational problems, particularly through traffic blocking on Washington Street adjacent to the proposed site, are caused by the following:

- 1. Vehicles maneuvering in and out of the on-street parking spaces
- 2. Vehicles stopping for pedestrians on crosswalks
- 3. Dunkin Donuts morning activity creating a frequent turn-over amongst the onstreet parking spaces.
- 4. The close proximity of multiple curb cuts (approximately 15 curb cuts within the study area) and side streets create through traffic blockage resulting from left turn vehicle access/egress.
- 5. Sight distance issues at side streets and curb cuts forces traffic to enter further onto Washington Street by encroaching or blocking one travel lane while exiting and also creates queue blockage.

All of these factors affecting traffic operations along this section of Washington Street need to be considered in the traffic study.

<u>Conley</u>: Conley Associates, Inc. is now analyzing all improvement scenarios with the intersections set to the Central Business District (CBD) setting in Synchro 6 software. The CBD setting takes into account on street parking maneuvers, pedestrian delays, and multiple curb cuts in close proximity. In addition many of the improvements now being investigated will attempt to alleviate much of the conflicting actions.

We are in agreement with the proponent using the CBD setting for their analysis, however, the CBD area should only be between River Street and Columbia Street. We request a minimum of 5 pedestrian calls during each peak hour period. It is highly unlikely that during any peak hour there will be only one pedestrian call. We request the proponent also include an estimated number of parking maneuvers in the analysis.

WASHINGTON STREET AT RIVER STREET

BETA: Washington Street westbound becomes a 12' single lane just west of the intersection. The lane drop area does not conform to design standards. The close



proximity of the multiple curb cuts, on-street parking activity and pedestrian crosswalks have traffic operational impacts in this area. These factors need to be considered in the analysis.

<u>Conley</u>: As stated previously, Synchro 6 software can include the impact of downstream lane drops on signalized intersections, but not unsignalized intersections. Some of the potential improvements now being investigated will attempt reduce the impact of the nearby conflict points and roadway geometry constrictions.

Though the lane drop area just west of the River Street and Washington Street intersection is not reflected in the analysis it is understood by BETA that the existing and no-build conditions at the intersection would in actuality perform at a worse level of service than the analysis demonstrates. BETA will review the proponent's revised overall mitigation analysis.

WASHINGTON STREET AT OAKLAND STREET

<u>BETA</u>: The Washington Street eastbound and westbound approaches to Oakland Street are analyzed as two lane approaches with an exclusive turning lane onto Oakland Street and a through lane. Washington Street is currently striped as a two lane roadway and operates this way as well. Revise your analysis accordingly in this study area to reflect a two lane roadway.

<u>Conley</u>: Conley Associates, Inc. has updated the intersection operations analysis with the correct lane geometry. The geometric change did affect the LOS at the intersection during any peak hour in any condition. The Oakland Street approach is still expected to operate at LOS D, LOS E, and LOS E during the weekday AM peak hour in the Existing, No Build, and Build conditions, respectively. The Oakland Street approach is still expected to operate at LOS C in all conditions during the weekday PM peak hour (with the updated decreased northbound left turn volume) and during the Saturday midday peak hour.

We have received the back-up analysis for the revised lane configuration in which the LOS does not change. We will review the revised analysis based on the overall mitigation options.

WASHINGTON STREET AT WALNUT STREET

BETA: The Washington Street/Walnut Street signal provides an exclusive pedestrian phase and a westbound advance which is not shown in the analysis. The phasing in the SYNCHRO analysis should include a westbound advance and an exclusive pedestrian phase with an estimate of actuations. The analysis should be revised accordingly (referring to signal timing at the intersection of Washington Street at Walnut Street).

<u>Conley</u>: Conley Associates, Inc. added a westbound advance and an exclusive pedestrian phase. With these changes to the signal timing the intersection is now expected to operate at LOS B during all peak hours in all conditions if there are no pedestrian calls. When there is a pedestrian call the intersection is expected to operate as LOS D during all peak hours in all conditions.



It is unrealistic to assume that on average zero pedestrian calls are made during any peak hour at the Washington Street and Walnut Street intersection. As previously stated BETA requests the analysis be rerun to include a minimum of 5 pedestrian calls during each peak hour.

WALNUT STREET AT RIVER STREET/CEDAR STREET

BETA: Looking at the analysis it appears that an exclusive pedestrian phase and advances were not included in the analysis but presently exist. We request that the proponent revise the analysis accordingly.

<u>Conley</u>: Conley Associates, Inc. added a southbound and westbound advance, as well as an exclusive pedestrian phase. With these changes to the signal timing the intersection is now expected to operate at LOS D during all peak hours in all conditions if there are no pedestrian calls. When there is a pedestrian call the intersection is expected to operate as LOS E during the weekday AM peak hour and LOS F during the weekday PM peak hour.

As previously stated BETA requests the analysis be rerun to include a minimum of 5 pedestrian calls during each peak hour.

PROPONENT'S MITIGATION

<u>BETA</u>: The proponent's only proposed mitigation is to signalize the Washington Street/River Street intersection and coordinate it with the existing signal at Concord Street/Washington Street. A traffic signal Warrant Analysis was not included in the traffic report and we request that this information be provided for our review to ensure that it meets the traffic signal warrant criteria.

<u>Conley</u>: Signalization of the River Street intersection meets Warrant #3 (Peak Hour Warrant) with more than 100 vehicles approaching a two plus lane roadway from a minor street during the peak hour. In addition the signalization of this intersection would also meet Warrant #6 (Coordinated Signal System) since it would be part of a coordinated signal system.

We request the proponent provide more information regarding which peak hour volumes met the Warrant #2 criteria.

<u>BETA</u>: While the proposed signal will provide improvements for the River Street approach, we want to mote that according to the SYNCHRO analysis, signalizing the intersection of Washington Street and River Street will result in a 500' queue on Washington Street eastbound direction during the AM peak hour and 300' queue during the Saturday peak hour. These long queues will block access to multiple driveways.

<u>Conley</u>: Signalizing River Street will not create a new queue of 500 feet in the eastbound direction. This queue, as calculated by Synchro is the same queue that currently occurs at the Concord Street intersection. Signalizing River Street will simply shift the queue from Concord Street to River Street, or approximately 350 feet to the west. The driveways that



would be blocked by the queue at River Street are the same driveways that are currently blocked by the standing queue in the eastbound direction during the weekday AM peak hour. As stated by BETA, the weekday AM eastbound queue has been observed as far back as Hillside Road. The closest intersection to the west of Hillside Road is BayState Road, approximately 600 feet west of Hillside Avenue. Therefore shifting the weekday AM eastbound queue 350 to the west would not block any additional intersections that are already not being blocked.

BETA understands that there is an existing queue issue in the study corridor along Washington Street. The concern is that a signal at the River Street and Washington Street intersection would not help mitigate the queue issue but simply relocate the queue further to the west along Washington Street. BETA will review the proponent's revised analysis for the various mitigation options.

<u>BETA</u>: The proponent should use Sim Traffic to identify internal blockages in short links between the River Street and Concord Street intersections.

<u>Conley</u>: Conley Associates, Inc. utilized the 95th percentile queues in Synchro 6, as well as reviewed the expected queue lengths using Sim Traffic. The timing and coordination of these two intersections would not cause queues to block each of the signalized intersections. The driveways in between the intersections would continue to be blocked during certain times of the day, as they are currently operating.

We request Conley provides the Sim Traffic backup data for the coordinated system between Concord Street and River Street for our review.

<u>BETA</u>: No mitigation was proposed for the outdated signal at Washington Street and Concord Street which is critical to the traffic operation on Washington Street.

<u>Conley</u>: The mitigation proposed by the proponent did include updating the signal equipment at the Concord Street intersection. Without this updating, the coordination with a signal at River Street would not be possible.

BETA recommends that a detailed description for the signal upgrade be provided.

<u>BETA</u>: The proponent should define and outline additional mitigation measures to improve and minimize pedestrian and traffic impacts within the study area.

<u>Conley</u>: The proponent is currently investigating several improvement options for the Washington Street corridor. It should be noted that the proposed development is not the cause for the need for the potential extensive mitigation. The potential improvements currently being investigated are necessary with or without the development of the proposed project to increase pedestrian and vehicular safety and increase vehicular capacity through the corridor.



This project would bring a minimum of 300 people into the study area. These residents would certainly utilize the surrounding sidewalks and produce additional vehicular trips along Washington Street which would directly affect the study area capacity. We request additional mitigation measures be addressed by the proponent. A detailed concept plan highlighting lane configurations with dimensions, access management, turn restrictions and parking management should be developed and provided for our review. A detailed TDM technique must be provided as part of the mitigations.

ADDITIONAL FINDINGS/RECCOMENDATIONS

PEDESTRIAN SAFETY EVALUATION

<u>BETA</u>: We recommend that the proponent repair any sidewalk areas addressed in their evaluation as deteriorating or having severe cracks.

<u>Conley</u>: The proponent is currently contemplating repairing sidewalks in 'fair' conditions as part of a potential mitigation package.

Sidewalk locations that will be repaired by the proponent should be clearly identified.

"ARBORPOINT AT WELLESLEY & RETAIL OFFICE BUILDING" SITE PLANS

<u>BETA</u>: Plan L-1 parking layout slightly differs from Architectural 1st Floor Plan. The overall parking spaces appear to be off by 2 spaces. *Please verify*.

No response was provided by the proponent.

<u>BETA</u>: No site plan related to the site driveway and Washington Street intersection configuration was provided for our review. Conceptual plans for any off site mitigation should be developed for our review. The site driveway plan should also show traffic and emergency vehicle access/egress at the site driveway particularly the left turn movement from Washington Street to the site drive.

<u>Conley</u>: The analysis at the Site Driveway intersection does not show a need for a westbound left turn lane into the proposed site. The site is expected to generate less than 85 vehicle trips entering the site during any peak hour. This is only one vehicle approximately every 43 seconds.

We request conceptual mitigation plans for the study area as well as emergency vehicle access/egress turning radius analysis at the site driveway.

GENERAL COMMENTS

<u>BETA</u>: For sight distance analysis purposes, speed studies should be included in this report for our review.



<u>Conley</u>: As per PSI requirements, Conley Associates, Inc. conducted a speed study along Washington Street in the study area. A memorandum dated December 20, 2007 was prepared summarizing the data of the speed study. This memorandum has since been supplied to BETA.

BETA received the speed study from the proponent on February 21, 2008. The speed study was dated December 20, 2007.

<u>BETA</u>: We recommend performing delay and gap studies for vehicles exiting River Street, Mica Lane and One Washington driveway.

<u>Conley</u>: As previously stated, at the review meeting it was decided that the collection of additional data is not pertinent at this time due to the potential improvements being investigated.

We agreement that no delay or gap study would be needed at this time as these driveways have similar characteristics as the 15 driveways located along the study area corridor between Glen Road and River Street.

<u>BETA</u>: Please provide turning radius runs for emergency vehicles entering and exiting the proposed site driveway and also maneuvering around the parking lot. Also, a loading area (for deliveries to the retail stores) should be shown on the site plan along with turning radius runs for a delivery truck.

<u>Conley</u>: The proponent's site engineer will provide emergency vehicle and delivery truck access and on site circulation plans.

BETA has received turning radius runs for emergency vehicles at the proposed site driveway and around the parking lot as requested for our review; however, the layout is outdated.

<u>BETA</u>: A detailed discussion on the traffic analysis for the site drive at Washington Street intersection should be provided in the traffic report particularly the left turn movement from Washington Street into the site drive.

<u>Conley</u>: As previously stated, the proposed development is not expected to generate a high volume of traffic during the peak hour (less than 85 vehicles entering the site during the weekday PM peak hour). During this peak hour there is expected to be less than 40 trips entering the site from the west (left turn entrance). This is approximately one left turn entering the site every 90 seconds. This volume does not necessitate nor warrant an isolated left turn lane. However, as part of the potential improvements being investigated at this time, a turning lane for the multiple driveways along the Washington Street corridor in the study area is being investigated.



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We request this additional traffic analysis performed at the proposed site driveway and Washington Street intersection. The analysis should include emergency vehicle and delivery truck turning radius analysis access and egress the site driveway.

ADDITIONAL COMMENTS

- 1. We request that the proponent provide more information regarding which peak hour volumes met which Warrant criteria for the Glen Road and Washington Street intersection.
- 2. In the proponent's next submission, we request LOS tables with updated analysis results.
- 3. The peak hour factors used in the analysis should be the average existing peak hour factors per approach obtained from the TMC's.

If we can be of any further assistance regarding this matter, please contact me at our office.

Very truly yours,

BETA Group, Inc.

Frank Romeo, P.E. President

Cc: Kien Ho, BETA Group, Inc.

Jennifer Conley, Conley Associates, Inc.

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